UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,685	11/09/2000	Jian Fan	10002599-1	4729

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EXAMINER
WORKU, NEGUSSIE

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
12/16/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
	09/709,685	FAN, JIAN
Office Action Summary	Examiner	Art Unit	
	NEGUSSIE WORKU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 October 2008</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-6, 8--21, 24-57</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1,3-6 and 8-16</u> is/are rejected.
7)☒ Claim(s) <u>2-21 and 24-57</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>1016/08</u>.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/16/08, has been entered.

Claim Rejections - 35 USC § 112

2.   Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Specifically, assigning each of multiple **'ones'** of the elements

a respective element label selected from a set of at least three element labels that

includes at least one edge element label; and further, grouping spatially connected

'ones' of the elements into respective blobs based on the element labels assigned to

the elements, wherein each of tile blobs is assigned a respective one of at least two

blob labels; and processing **'ones'** of the elements based at least in part on the blob

labels assigned to the blobs and the element labels assigned to the elements. Examiner

would like to bring claim1, to applicant attention that, Examiner has a question and is

not clear to understand the limitation. However, the below discussed Office action has

been submitted as best under stood by examiner.

Response to Arguments

3.   Applicant's arguments filed 03/08/2008 have been fully considered but they are

not persuasive.

Regarding claim 1, Applicant alleged that the combination of the cited prior arts

AlHussein (USP 5,818,978) in view of Mahoney (USP 6,009,196), fails to show or

suggest the invention of claim 1, specifically "assigning each of multiple ones of the

elements a respective element label selected from a set of at least three element labels

that includes at least one edge element label; grouping spatially connected ones of the

elements into respective blobs based on the element labels assigned to the elements,

wherein each of the blobs is assigned a respective one of at least two blob labels; and

processing ones of the elements based at least in part on the blob labels assigned to

the blobs the-and the element labels assigned to the elements".

In response, the Examiner respectfully disagrees because the test for

obviousness is not whether the features of a secondary reference may be bodily

incorporated into the structure of the primary reference; nor is it that the claimed

invention must be expressly suggested in any one or all of the references. Rather, the

test is what the combined teachings of the references would have suggested to those of

ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In

this case, the Examiner asserts that the combination of AlHussein '978' when

considered as a whole clearly teaches that" a method of processing an image of an

element, (image scanned by scanner section 22 of fig 5, received by computer 20 of fig

5, for further processing, see col.8, lines 63-68), assigning each of multiple ones of the

elements (pixels of image) a respective element label selected from a set of at least

three element labels that includes at least one edge element label (computer receive

scanned image from a scanner, assign image pixel for further processing, according to

pixel selected, see col.3, lines 54-56 and col.2, lines 25-32), are well- known in the art at

the time of the invention was made. In particular, Mahoney (196), clearly suggested the

advantage of combining of a document image capture method and an image processing

as shown in fig 1, grouping spatially connected ones of the elements into respective

blobs based on the element labels assigned to the elements, i.e., pixels are classifying

operation 66 of fig 2, wherein each of the blobs is assigned a respective one of at least

two blob labels i.e., the out put from process 32 of fig 2 is set of connected components

or "blob", see col.8, lines 62-6; and processing ones of the elements based at least in

part on the blob labels assigned to the blobs the and the element labels assigned to the

elements as discussed col.7, lines 6-15.

In view of the above, having the system of AlHussein '978' and then given the

well- established teaching of Mahoney '196', the Examiner asserts that it would have

been obvious to one having ordinary skill in the art at the time of the invention was

made to combine the teachings of the references cited because, it would have allowed

a user ensure that acquired image data will be of quality and a resolution suitable for the

content of the image, even if the image contains text together with gray scale or color image or both.

Further, with respect to Applicant's arguments of page 5 and 8, Examiner has respectfully disagree with applicant's characterization of the 103 (a) rejection. Examiner respectfully submits that the claimed subject matter of claim 1 would have been obvious to one of ordinary skill in the art pertinent to Assignee's claimed subject matter at the time it was made. See KSR International, Co. v. Teleflex, Inc., 550 U.S. (decided April 30, 2007). Some of the factors to consider in this analysis include the differences between the applied prior arts and applicant's claimed subject matter, along with the level of skill associated with one of ordinary skill in the art pertinent to the claimed subject matter at the time it was made. See USPTO Memo entitled "Supreme Court decision on KSR Int'l. Co.,V. Teleflex, Inc.," (May 3, 2007).

In addition, one way in which an Examiner already had establish a prima facie case of un patentability under 35 USC § 103 would be to show that the applied documents, alone or in combination, disclose or suggest every element of the claimed subject matter. And also, the Examiner had shown that there is a reasonable expectation of success from the proposed combination of the prior arts.

Finally, the Examiner has respectfully disagree with applicant's opinion that examiner had not shown the motivation. The motivation or suggestion to make the proposed combination and the reasonable expectation of success of combination has been discussed as set forth in the above indicated Office action.

Examiner respectfully submits that the prior arts used, alone or in combination,

to teach, suggest or make obvious at least the Applicant's claim 1, and as such the

Office action Fully satisfies the requirements of 35 U.S.C. § 103 and is unpatentable.

For the reasons given above, the Examiner asserts that the combination of

AlHussein '978' and Mahoney '196' does in fact disclose the claimed invention, and

known to ordinary skilled in the art at the time of the invention was made, thus, the

rejections are maintained as fallows:

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 3-6, 8-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Al-Hussein (USP 5,818,978) in view of Mahoney (USP 6,009,196).

With respect to claim 1, Al-Hussein discloses a method of processing an image

of an element, (image scanned by scanner section 22 of fig 5, received by computer 20

of fig 5, for further processing, see col.8, lines 63-68), comprising: assigning each of

multiple ones of the elements (pixels of image) a respective element label selected from

a set of at least three element labels that includes at least one edge element label

(computer receive scanned image from a scanner, assign image pixel for further

processing, according to pixel selected, see col.3, lines 54-56 and col.2, lines 25-32).

Al-Hussein dose not disclose grouping spatially connected ones of the elements into respective blobs based on the element labels assigned to the elements, wherein each of the blobs is assigned a respective one of at least two blob labels; and processing ones of the elements based at least in part on the blob labels assigned to the blobs the and the element labels assigned to the elements.

Mahoney (196)., in the same area of a document image capture method and an image processing (as shown in fig 1), teaches grouping spatially connected ones of the elements into respective blobs based on the element labels assigned to the elements, (pixels are classifying operation 66 of fig 2) wherein each of the blobs is assigned a respective one of at least two blob labels (the out put from process 32 of fig 2 is set of connected components or "blob", see col.8, lines 62-68); and processing ones of the elements based at least in part on the blob labels assigned to the blobs the and the element labels assigned to the elements (see col.7, lines 6-15).

Therefore, It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Al-14ussein by the teaching Mahoney (196) because of the following reasons: It would have allowed to a user ensure that acquired image data will be of quality and a resolution suitable for the content of the image, even if the image contains text together with gray scale or color image or both.

With respect to claim 3, Al-Hussein discloses the method (fig 1-5), the method wherein the elements correspond to pixels-of the image, see (co1.10, lines 5-15).

With respect to claim 4, Al-Hussein discloses the method (fig 1-5); wherein the background assigning comprises determining a white threshold value from luminance values associated with ones of the elements, see (co1.18, lines 10-12).

With respect to claim 5, Al-Hussein discloses the method (fig 1-5), wherein then formation assigning comprises determining a black threshold value from the determined white threshold value, see (co1.18, lines 10-12).

With respect to claim 6, Al-Hussein discloses the method (fig 1-5), wherein the assigning comprises determining a color threshold based at least in part on color values respectively associated with ones of the elements step, see (col.2, lines 45-48).

With respect to claim 8, Al-Hussein discloses the method (as shown in fig 5), wherein the assigning comprises labeling ones of the elements with respective ones of the element labels based at least in part on luminance values respectively associated with the elements, (step 1207 of fig 12, see co1.18, and see also lines 5-10, co1.18, line 5-15).

With respect to claim 9, Al-Hussein discloses the method (as shown in fig 5), wherein the label comprises comparing the luminance values to step a white threshold value, see co1.12, lines 50-55).

With respect to claim 10, Al-Hussein et al. discloses the method (as shown in fig 5), wherein the labeling comprises step of assigning t-o-each of multiple ones of the pixel elements of a respective one of a black element label, a white element label, and a gray element label based on comparisons of the luminance values to a white threshold

and a black threshold, (step 1207 of fig 12, a given value for a black pixel 1", for white

0" value is given and are adjacent (white pixel), see co1.12, lines 50-55.

With respect to claim 11, AI-Hussein et al. discloses the method (as shown in fig

1), wherein the labeling comprises step of assigning t-o-each of multiple ones of the

pixel elements of a respective one of a black element label, a white element label, and a

gray element label based on comparisons of the luminance values to a white threshold

and a black threshold, (pixel set to binary 1", if pixel is black) pixel is white, see (co1.12,

lines 51-54).

With respect to claim 12, AI-Hussein et al. discloses the method (as shown in fig

5), wherein the labeling comprises assigning to-each of multiple ones of the elements a

respective one of a black element labels, a white element label, and a color element

label, see (co1.17, lines 33-38), see also col.3, lines 45-48).

With respect to claim 14, AI-Hussein et al. discloses wherein the using grouping

is based on a respective-an eight neighbor's system connectivity analysis performed for

each of the elements, see (co1.17, lines 33-35, co1.13, lines 35-40).

With respect to claim 15, AI-Hussein et al. discloses the method (as shown in fig

5), the method of claim 1 wherein the step of identifying each element that is adjacent

includes the step of identifying adjacent pixels that are background pixels, (co1.13, lines

35-40).

With respect to claim 16, Al-Hussein et al. discloses the method (as shown ~n fig

5), wherein the grouping comprises step-of labeling adjacent ones of the elements that

is outside the background blob label a non-background blob label pixel, (col.2, lines 5-

9).

With respect to claim 23, Al-Hussein et al. discloses the method (as shown ~n fig

5), wherein the grouping comprises step-of labeling adjacent ones of the elements that

is outside the background blob label a non-background blob label pixel, (col.2, lines 5-

9).

Claims Objected to having Allowable subject matter

6.   Claims 2-21, 24-57 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims. Therefore, the prior art

searched or cited do not teach or disclose the method of claim 2-12, 17-21, 24-57,

wherein segmenting spatially connected ones of the elements in each of the blobs into

respective sub-blobs based on the labels assigned to the elements, wherein each of the

sub-blobs is assigned to a respective one of at least two sub-blob labels, wherein the

processing is based at least in part on the sub-blob labels assigned to the sub-blobs.

As to claim 13, the prior art does not teach or disclose he method wherein the

grouping comprises grouping spatially connected ones of the elements that are

assigned element labels within a first subset of the element labels into a respective one

of the blobs assigned a first blob label, and grouping spatially connected ones of the

elements that are assigned element labels within a second subset of the element labels

into a respective one of the blobs assigned a second blob label.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Negussie Worku whose telephone number is (571)272-

7472. The examiner can normally be reached on 9A-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Negussie Worku/

Examiner, Art Unit 2625